

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1-2. (Canceled)

3. (Currently Amended) ~~The method of claim 2~~ A method of scheduling radio resources for a user in a plurality of users in a telecommunication packet-switched system, each of the users having an associated Quality of Service (QoS), said method comprising the steps of:

calculating a scheduling number (S_i) based on earlier schedulings for each of the users before each new scheduling;

allocating a weight (W_i) in the scheduling process to each user based on each user's associated QoS;

creating a relationship (r) between the weight (W_i) and the scheduling number (S_i), said relationship being decisive of which user is to be scheduled, wherein the relationship is the ratio (W_i/S_i) between the weight and the scheduling number;

observing the scheduled user's dynamic behavior; and

scheduling radio resources for the scheduled user based on at least the following parameters:

the allocated weight (W_i) of the scheduled user compared to the weights of other users;

earlier schedulings of radio resources; and

the dynamic behavior of the scheduled user.

4-5. (Canceled)

6. (Currently Amended) ~~The method of claim 2~~ A method of scheduling radio resources for a user in a plurality of users in a telecommunication packet-switched system, each of the users having an associated Quality of Service (QoS), said method comprising the steps of:

calculating a scheduling number (S_i) based on earlier schedulings for each of the users before each new scheduling, wherein the scheduling number for a user is increased by 1 as soon as the user has been scheduled;

allocating a weight (W_i) in the scheduling process to each user based on each user's associated QoS;

creating a relationship (r) between the weight (W_i) and the scheduling number (S_i), said relationship being decisive of which user is to be scheduled;

observing the scheduled user's dynamic behavior; and

scheduling radio resources for the scheduled user based at least on the following parameters:

the allocated weight (W_i) of the scheduled user compared to the weights of other users;

earlier schedulings of radio resources; and

the dynamic behavior of the scheduled user.

7-9. (Canceled)

10. (Currently Amended) The system of ~~claim 9~~ claim 11 wherein each user has a reservation on a ~~PSET comprising of a~~ number of packet-switched channels.

11. (Currently Amended) ~~The system of claim 9~~ A system for performing scheduling of a number of users sharing the same communication channels in a packet-switched radio communication system during a scheduling session, said system comprising:

means for calculating a scheduling number (S_i) for each user dependent on earlier schedulings for the user and other users;

means for calculating a weight (W_i) associated with a Quality of Service assigned to each user; and

means for taking into account different users entering or leaving the scheduling session in order to ensure a fair distribution of radio resources among the different users according to their assigned weights independent of when each user enters the scheduling session;

wherein the scheduling number (~~S~~) (S_i) is initially set to a value of 1 for users participating in the session from the start, while users entering the session later get either 1 or $W_i \cdot \Sigma S_i / ((\Sigma W_i) - W_i)$, whichever is larger, as their initial scheduling number, where

W_i is the weight assigned to the user,

ΣW_i is the sum of weights for all users, and

ΣS_i is the sum of scheduling numbers for earlier users.

12-14. (Canceled)

15. (Currently Amended) The method of ~~claim 14~~ claim 17, further comprising the steps of:

establishing a Temporary Block Flow (TBF) for data to be sent by each user;

dividing the TBF into radio blocks; and

sending one radio block over the radio interface when the user is scheduled.

16. (Canceled)

17. (Currently Amended) ~~The method of claim 16, wherein the step of calculating the scheduling number as a function of earlier scheduling numbers (S_i) and the weights (W_i) of all users includes the steps of:~~ A method of scheduling radio resources for a user in a plurality of users in a telecommunication packet-switched system, each of the users having an associated Quality of Service (QoS), said method comprising the steps of:

calculating a scheduling number (S_i) based on earlier schedulings for each of the users before each new scheduling;

allocating a weight (W_i) in the scheduling process to each user based on each user's associated QoS;

creating a relationship (r) between the weight (W_i) and the scheduling number (S_i), said relationship being decisive of which user is to be scheduled;

observing the scheduled user's dynamic behavior; and

scheduling radio resources for the scheduled user based at least on the following parameters:

the allocated weight (W_i) of the scheduled user compared to the weights of other users;

earlier schedulings of radio resources; and

the dynamic behavior of the scheduled user;

wherein the step of calculating a scheduling number includes the steps of:

when the scheduling process begins, assigning each user being scheduled, a scheduling number with a starting value of 1; and

for new users entering the scheduling process once it has started, calculating the scheduling number as a function of earlier scheduling numbers (S_i) and the weights (W_i) of all users by calculating the starting scheduling number for a user entering the scheduling process once it has started using the equation, $W_i \cdot \sum S_i / ((\sum W_i) - W_i)$, if the equation yields a value greater than 1; and assigning a scheduling number with a starting value of 1 to the user entering the scheduling process once it has started, if the equation yields a value that is not greater than 1.

18. (Previously Presented) The method of claim 3, wherein the step of scheduling radio resources for the user includes scheduling transmission of a radio block for the user if the ratio W_i/S_i for the user is larger than the ratio for any other user.

19. (Currently Amended) ~~The system of claim 9 further comprising:~~ A system for performing scheduling of a number of users sharing the same communication channels in a packet-switched radio communication system during a scheduling session, said system comprising:

means for calculating a scheduling number (S_i) for each user dependent on earlier schedulings for the user and other users;

means for calculating a weight (W_i) associated with a Quality of Service assigned to each user;

means for calculating a ratio (W_i/S_i) between the weight and the scheduling number for each user; and

means for scheduling transmission of a radio block for a given user if the ratio W_i/S_i for the given user is larger than the ratio for any other user; and

means for taking into account different users entering or leaving the scheduling session in order to ensure a fair distribution of radio resources among the different users according to their assigned weights independent of when each user enters the scheduling session.